

Spot Safety Project Evaluation

Project Information

Order ID: 41000028050

Project ID: 02-05-206

Location: NC 55 at NC 903

County: Lenoir

City: South of LaGrange

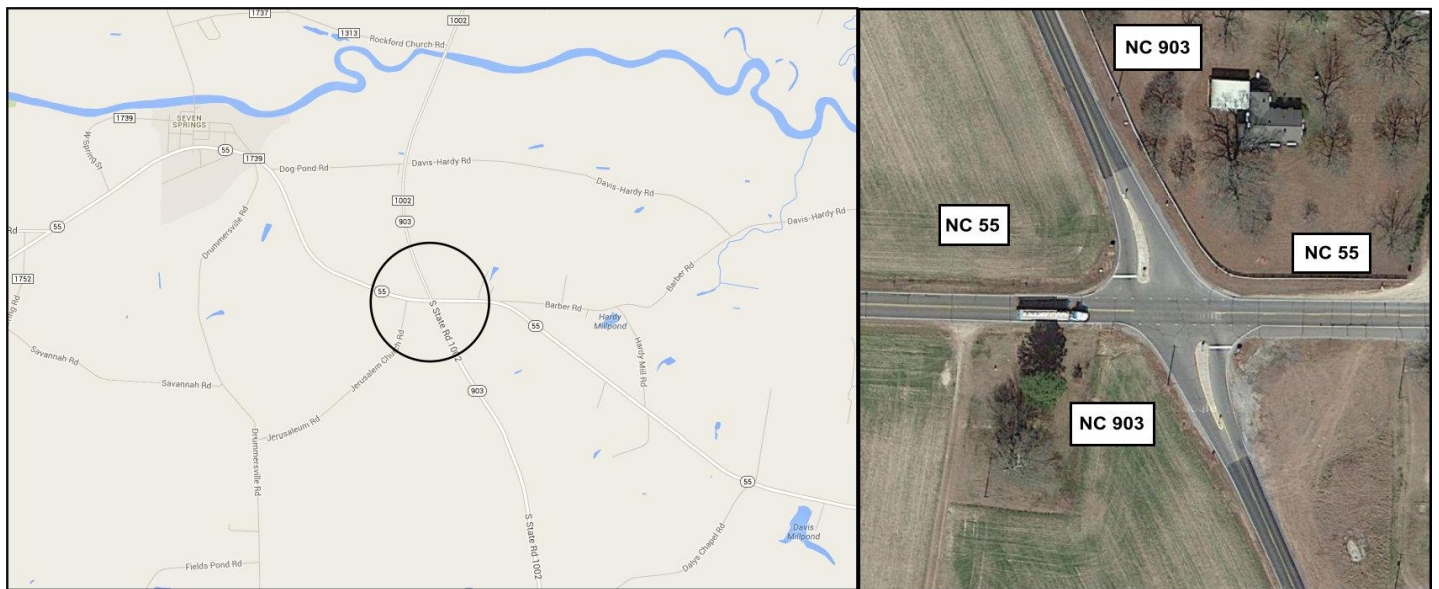
Division: 2

Countermeasure: Channelization Revision – Improve 65 degree skew angle of intersection, install concrete islands with stop signs on both approaches of NC 903.

Project Completion: September 8, 2009

Project Cost: \$41,000

Map and Aerial (from Google Maps)



Naive Before and After Analysis

Before Period: February 1, 2005 through May 31, 2009 (4 years, 4 months)

Const. Period: June 1, 2009 through September 30, 2009

After Period: October 1, 2009 through January 31, 2014 (4 years, 4 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the NC 55 and NC 903 approaches.

Target Crashes: Frontal Impact Crashes. Please note that Frontal Impact Crashes were the target crashes for the applied countermeasure. Frontal Impact crashes include: Left turn, same roadway; Left turn, different roadways; Right turn, same roadway; Right turn, different roadways; Head on; and Angle.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	18	2	- 88.9 %
Total Severity Index	13.94	1.00	- 92.8 %
Target Crashes	17	2	- 88.2 %
Target Crash Severity Index	14.7	1.0	- 93.2 %
Volume (2007, 2011)	3,900	4,100	+ 5.1 %

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	0	0	N/A
Class A injury Crashes	2	0	- 100.0 %
Class B injury Crashes	3	0	- 100.0 %
Class C Injury Crashes	8	0	- 100.0 %
Property Damage Only	5	2	- 60.0 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Angle Crashes (Target)	15	2	- 86.7 %
Southbound-Eastbound Angle Crashes	7	1	- 85.7 %
Southbound-Westbound Angle Crashes	2	1	- 50.0 %
Northbound-Eastbound Angle Crashes	1	0	- 100.0 %
Northbound-Westbound Angle Crashes	5	0	-100.0 %

Overall Summary Results

Total Crashes:	- 89 %	(reduction)
Total Crash Severity:	- 93 %	(reduction)
Target Crashes:	- 88 %	(reduction)
Target Crash Severity:	- 93 %	(reduction)
Volume:	+ 5 %	(increase)

Additional Summary Results

Angle Crashes (Target):	- 87 %	(reduction)
Southbound-Eastbound Angle Crashes:	- 86 %	(reduction)

Items for Discussion/Concerns

The southbound NC 903 and eastbound NC 55 angle crash approaches experienced an 86 percent reduction in crashes (7 to 1 crashes).

The intersection overall experienced a reduction of angle crashes in the after period of 87 percent (15 to 2 crashes).

Additionally, there were no injury crashes in the after period, and the total severity index decreased by 93 percent.

Data Prepared For

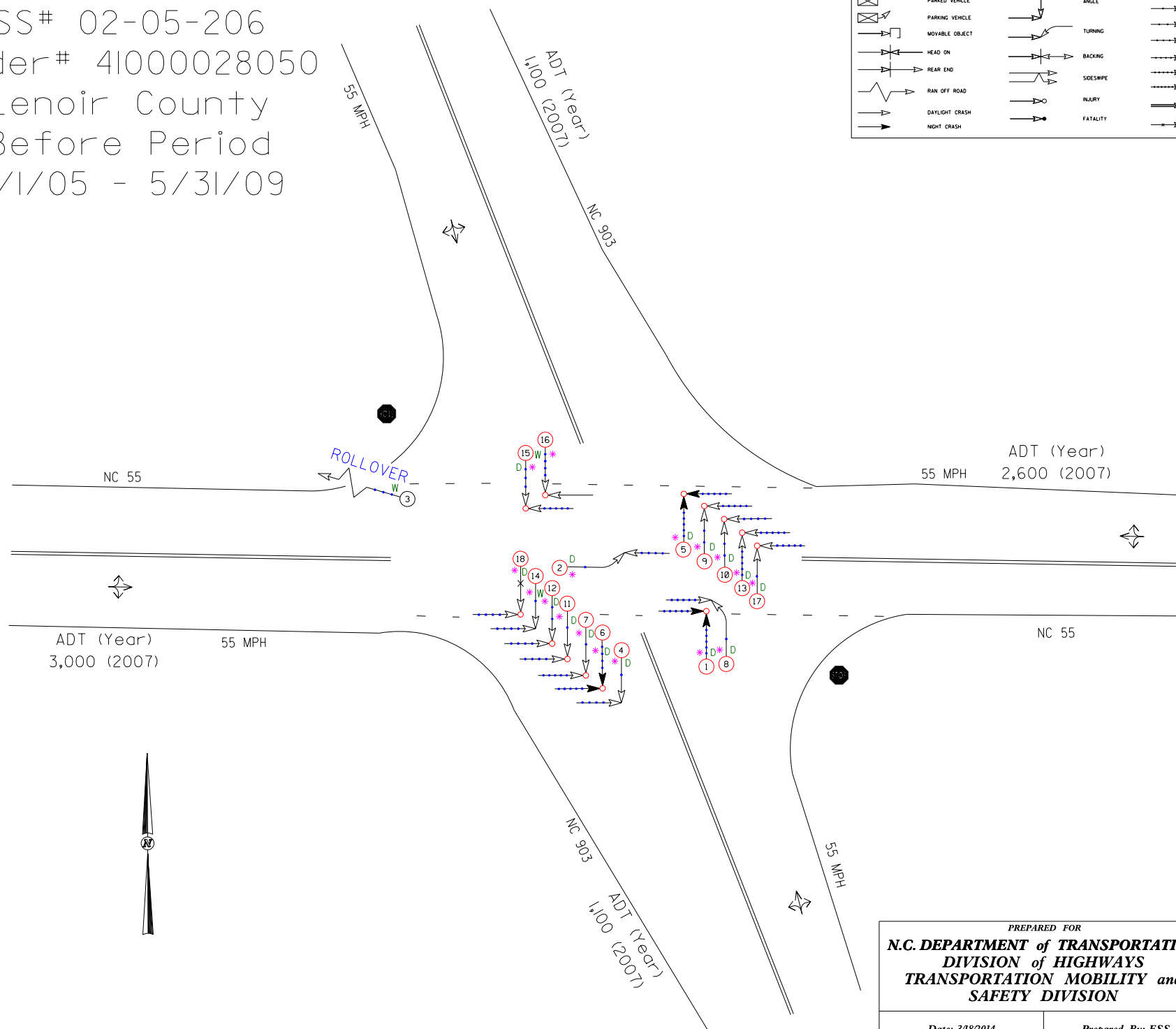
The Traffic Safety Unit *of the*
Transportation Mobility and Safety Division *of the*
Division of Highways *of the*
North Carolina Department of Transportation

Data Prepared By

Principal Investigator: Elizabeth Scott, EI
Work Group/Consultant: Stantec Consulting Services, Inc.
Date: March 18, 2014

SS# 02-05-206
 Order# 41000028050
 Lenoir County
 Before Period
 2/1/05 - 5/31/09

LEGEND			
	MOVING VEHICLE		ANGLE
	PARKED VEHICLE		TURNING
	PARKING VEHICLE		BACKING
	MOVABLE OBJECT		SIDESWIPE
	HEAD ON		INJURY
	REAR END		FATALITY
	RAN OFF ROAD		9 MPH OR LESS
	DAYLIGHT CRASH		10 MPH TO 19
	NIGHT CRASH		20 MPH TO 29
			30 MPH TO 39
			40 MPH TO 49
			50 MPH TO 59
			60 MPH TO 69
			70 AND UP
			SPEED UNKNOWN
			A ANIMAL
			P PEDESTRIAN
			B BICYCLE
			T TRAIN
			* DRIVER AT FAULT
			D DRY
			W WET
			I ICY OR SNOWY
			O OTHER



PREPARED FOR
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
TRANSPORTATION MOBILITY and
SAFETY DIVISION

Date: 3/18/2014

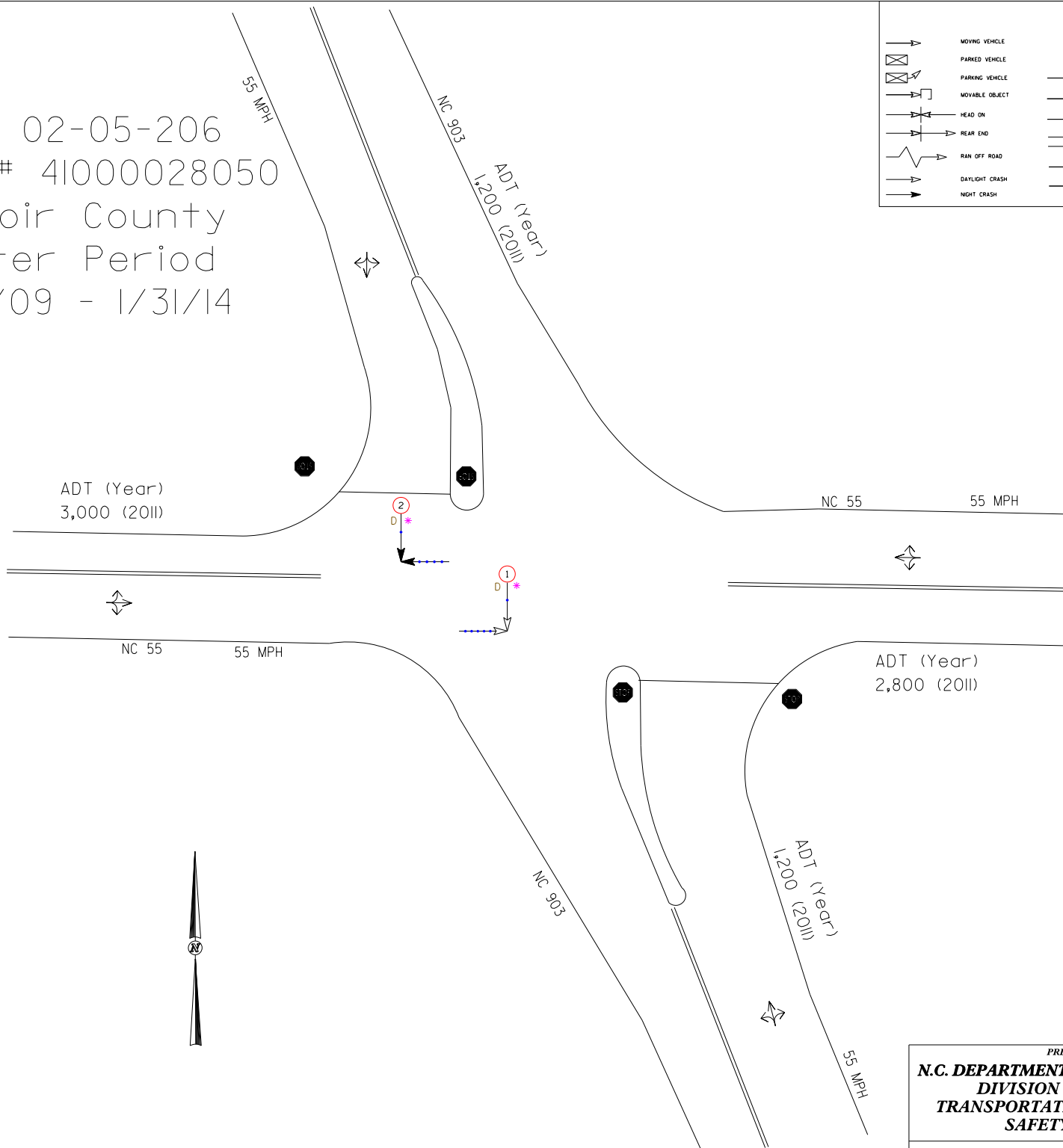
Prepared By: ESS



Stantec

Stantec Consulting Services Inc.
 801 Jones Franklin Road
 Suite 300
 Raleigh, NC 27606
 Tel. (919) 851-6866
 Fax. (919) 851-7024
 www.stantec.com
 License No. F-0672

SS# 02-05-206
 Order# 41000028050
 Lenoir County
 After Period
 10/1/09 - 1/31/14



LEGEND			
	MOVING VEHICLE		ANGLE
	PARKED VEHICLE		TURNING
	PARKING VEHICLE		BACKING
	MOVABLE OBJECT		SIDESWIPE
	HEAD ON		INJURY
	REAR END		FATALITY
	RAN OFF ROAD		9 MPH OR LESS
	DAYLIGHT CRASH		10 MPH TO 19
	NIGHT CRASH		20 MPH TO 29
			30 MPH TO 39
			40 MPH TO 49
			50 MPH TO 59
			60 MPH TO 69
			70 AND UP
			SPEED UNKNOWN
			A ANIMAL
			P PEDESTRIAN
			B BICYCLE
			T TRAIN
			* DRIVER AT FAULT
			D DRY
			W WET
			I ICY OR SNOWY
			O Other

PREPARED FOR
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
TRANSPORTATION MOBILITY and
SAFETY DIVISION

Date: 3/18/2014

Prepared By: ESS



Stantec

Stantec Consulting Services Inc.
 801 Jones Franklin Road
 Suite 300
 Raleigh, NC 27606
 Tel. (919) 851-6866
 Fax. (919) 851-7024
 www.stantec.com
 License No. F-0672